

How to use metal detectors more professionally ?

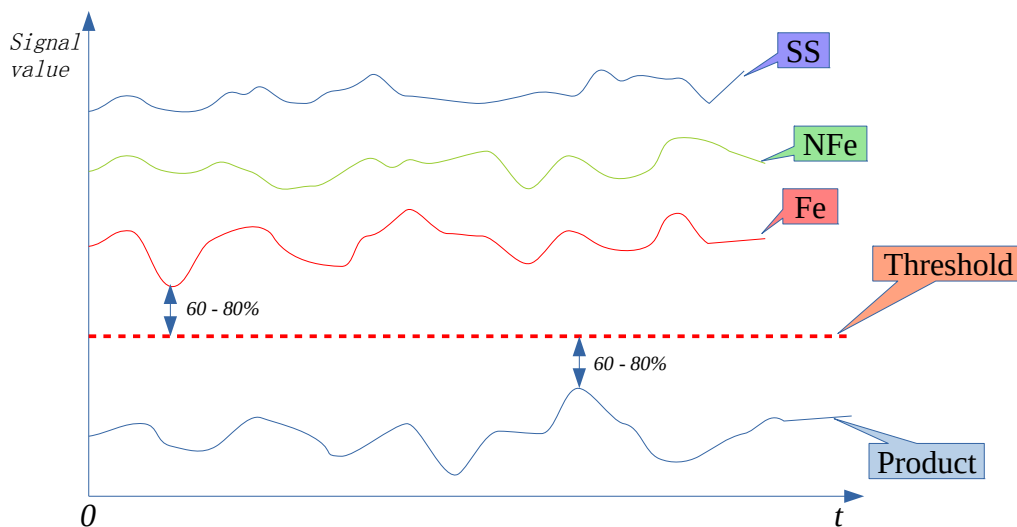
Here is a mathematical method that can be applied to almost any metal detectors. It can help you analyze and evaluate a metal detector, but it cannot help you troubleshoot or repair the machine. But it can still do many things, such as:

- 1, If your standard is 1.5Fe, 2.0NFe, 2.5SS or other, how much threshold should be set on the Metal Detector to enforce this standard ?
- 2, Many customers like higher sensitivity, but that will result in a higher false alarm rate. In this way, you can choose a more appropriate implementation standard.
- 3, This method can also be used for real-time monitoring of metal detectors, and promptly warns when a higher false alarm rate, especially a higher missed detection rate occurs.
- 4, Many users may verify metal detectors every hour. When the standard metal test piece is found to be invalid, the product in the previous period of time should be isolated and re-examined. But generally speaking, as long as it is re-verified, the metal test piece will almost certainly be detected again. Do you know why this is?

There are actually more uses...

You should know there are three sets of data in a metal detector:

- 1, Product signal value
- 2, Threshold, it is higher than the Product signal value
- 3, The signal value of the metal verification test piece. Generally include the signal values of three sets of standard metal test pieces.



So first, we need to analyze the law of each group of signal values.

If you don't want to do complex data analysis, here is our recommended estimation formula:

- 1, The product signal value is recommended to be controlled at 60%-80% of Threshold.

If the product signal value is less than 60% of Threshold, it means that the false alarm rate is extremely low.

And the upper limit of the product signal value, we strongly recommend not to exceed 80%. Otherwise, you should increase Threshold, because more than 80% will cause obvious false alarms.

2, For Threshold, the truth is exactly the same, it should not exceed about 80% of the smallest signal value of the metal test piece at most.

At the same time, if it is less than 60%, then you almost don't need to worry about the verification failure of the metal test piece.

3, For false alarms, this method of course cannot include various interferences and other external uncertain factors, but if the interference occurs frequently, it is also applicable.

If you want to understand this issue or any metal detector issue more professionally, welcome contact us: support@devodt.com.

Note:

- 1, We are currently unable to verify all metal detectors and may have limitations in applicability.
- 2, 60-80% is a rough recommended range, not an accurate range, but it is enough to make you more professional in the use of metal detectors.
- 3, Therefore, the actual calculation is not the minimum value of the standard test piece, or the maximum value of the product signal, because it is impossible to know the true minimum and maximum values.
- 4, But in the future, if this function is integrated into the metal detector, or a separate device is designed, it will be more accurate and reliable.

If you find anything, please contact us. Thanks.